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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,280	03/02/2007	Hendrik Sjirk Wagter	U 016315-9	5984

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EXAMINER	
BOLOTIN, DMITRIY	
ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
03/31/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/580,280	WAGTER, HENDRIK SJIRK	
	Examiner	Art Unit	
	DMITRIY BOLOTIN	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *51-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *51-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Claim Objections

1. **Claims 52, 62 and 72** are objected to because of the following informalities: the word "**electroforetic**" should be changed to -- **electrophoretic**. Appropriate correction is required.

2. **Claim 63** is objected to because of the following informalities: the word "**vapour**" should be changed to -- **vapor**. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 74 is rejected under 35 U.S.C. 101 because the claimed recitation "*information carrier and /or holder suitable and* ***intended for use***", "without setting forth any steps involved in the process, results in an improper definition of a process, i.e.,

results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 54, 56, 60, 67, 70 and 74** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding **claims 54, 56, 60 and 67**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

As to **claim 54** (dependent on 52), it is unclear how a display which is an electrophoretic display, an electrowetting display, an LCD or nano LCD (as recited in claim 52) could comprise addressable surface parts comprising electroluminescent elements, preferably a LED, preferably an organic LED such as polymer LED.

Claim 70 recites the term "**substantially**" in which is a relative term that renders the claim indefinite. The term "**substantially**" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the

invention. In this case it is unclear how close to S shape is the shape of the cross-section of the rotor.

Claim 74 recites "information carrier and/or holder suitable and intended for use", but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 51 – 56, 60 – 65, 67 and 70 – 74** are rejected under 35 U.S.C. 103(a) as being unpatentable over Procupetz (EP 1099564 A1) in view of Migler (US 6,926,491), Thagard et al. (US 2001/0043164) and Albert et al. (US 2002/0018042).

As to **claim 51 and claim 71**, Procupetz discloses an assembly comprising one or more devices (fig. 1) each comprising an information carrier (laminar body 2 of fig. 1) and a holder for the information carrier (supporting component 1 of fig. 1), wherein

Procupetz fails to disclose the information carrier is movably connected to at least a portion of the holder, wherein the information carrier comprises a wind surface for moving at least the wind surface under the influence of the wind, wherein the wind surface comprises a display comprising a series of addressable surface parts situated in the surface, which surface parts can be switched to a first and a second state, wherein the surface parts in the first state visually differs from the surface parts in the second state, wherein the device comprises control means for addressing the individual surface parts, and wherein the display is suitable for retaining a certain image when, after placing said image, a power supply to the display is virtually stopped.

In the same field of endeavor, Migler discloses an assembly wherein information carrier (sail 8 of fig. 1) is movably connected (vertical collar 5 of fig. 1 or "mast-collar" is mounted on said mast 6 of fig. 1 and is able to rotate freely around the mast 6 on friction-reducing bearings (not shown), col. 2, lines 45 – 50) to at least a portion of the holder (vertical member 2 with horizontal arm 4 of fig. 1), wherein the information

carrier comprises a wind surface for moving at least the wind surface under the influence of the wind (sails are responsive to the blowing wind, col. 1, lines 58 – 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Procupetz by providing an assemble disclosed by Migler, so as to be able to effectively capture energy of uncontrolled gybe (Migler, col. 1, lines 50 – 60).

Procupetz in view of Migler fails to disclose an assembly wherein the wind surface comprises a display comprising a series of addressable surface parts situated in the surface, which surface parts can be switched to a first and a second state, wherein the surface parts in the first state visually differs from the surface parts in the second state, wherein the device comprises control means for addressing the individual surface parts, and wherein the display is suitable for retaining a certain image when, after placing said image, a power supply to the display is virtually stopped.

In the same field of endeavor, Thagard discloses an assembly wherein a display (display 14 of fig. 1) comprising a series of addressable surface parts situated in the surface (two-dimensional array of pixels 14A of fig. 3, [0028]), which surface parts can be switched to a first and a second state (selectively displaying an image, [0028 – 0033]), wherein the surface parts in the first state visually differs from the surface parts in the second state (turning display elements on or off, [0028 – 0033]), wherein the device comprises control means for addressing the individual surface parts (processor 30 and display driver 32 of fig. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Procupetz in view of Migler, by providing a flexible display as disclosed by Thagard, so as to be able to provide a weaved structure which can display temporary images which could be easily removed or changed (Thagard, [0005 – 0009]).

Procupetz in view of Migler and Thagard fails to disclose that the display is suitable for retaining a certain image when, after placing said image, a power supply to the display is virtually stopped.

In the same field of endeavor, Albert discloses a display which is suitable for retaining a certain image when, after placing said image, a power supply to the display is virtually stopped (electrophoretic display, [0093]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Procupetz in view of Migler and Thagard, by providing a bi-stable flexible display which consumes very little power (Albert, [0003])

As to **claim 52** (dependent on 51), Albert discloses assembly, wherein the display is an electrophoretic display [0093].

As to **claim 53** (dependent on 51), Thagard discloses assembly, wherein the addressable surface parts are placed in columns and rows for forming a matrix display (14A of fig. 3, [0028]) for displaying changing and/or moving images [0033].

As to **claim 54** (dependent on 52), Thagard discloses assembly, wherein the addressable surface parts comprises an electroluminescent element (light emitting polymer, [0026]).

As to **claim 55** (dependent on 51), Thagard discloses an assembly, wherein the device comprises a receiver (interface 38 of fig. 3) for receiving data for displaying on the display (transferring data from laptop, [0029]), wherein the receiver is connected to the control means for transmitting the data from the receiver to the control means (processor 30 and display driver 32 of fig. 3), wherein the receiver preferably comprises a wireless receiver, preferably a radio receiver (radio receiver [0029]).

As to **claim 56** (dependent on 51), Thagard discloses assembly, wherein the assembly further comprises a data processing device , such as for instance a computer (laptop, [0029]), for exchanging data with the individual or collective devices (via interface 38 of fig. 3, [0029]).

As to **claim 60** (dependent on 51), Migler discloses assembly, wherein the device further comprises means for generating electric power (generator 15 of fig. 1) from a force exerted by the wind (as shown in fig. 2) on the wind surface (sail 8 of fig. 1), preferably means for generating electric power from the movement of at least the wind surface under the influence of the wind (rotation of collar 2 drives generator 15 to generate electricity, col. 3, lines 1 – 20), but Procupetz in view of Migler fails to disclose wherein the means for generating electric power can be connected to means for energy

storage, such as for instance a battery, the display and/or the control means for supplying electric power thereto.

Thagard discloses assembly comprising a battery (45 of fig. 3), the display (14 of fig. 3) and/or the control means (30 and 32 of fig. 3) for supplying electric power thereto.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Procupetz in view of Migler, by providing a flexible display as disclosed by Thagard and connecting the generator to the battery, so as to be able to provide a weaved structure which can display temporary images which could be easily removed or changed (Thagard, [0005 – 0009]).

As to **claim 61** (dependent on 60), Migler discloses assembly, wherein the wind surface of the device (sail 8 of fig. 1) is rotatably connected to the holder (vertical collar 5 of fig. 1 or "mast-collar" is mounted on said mast 6 of fig. 1 and is able to rotate freely around the mast 6 on friction-reducing bearings (not shown), col. 2, lines 45 – 50) and wherein the means for generating electric power comprise a rotating generator (generator 15 of fig. 1), and wherein the wind surface preferably forms a wind turbine (TITLE).

As to **claim 62** (dependent on 51), Albert discloses assembly, wherein the display is bendable and preferably flexible (flexible substrate, [0102]), wherein the display is preferably made of an electronic fabric, preferably woven from yarn-shaped material (woven material, [0102]) comprising an electrophoretic material (electrophoretic display, [0093]).

As to **claim 63** (dependent on 51), Thagard discloses assembly, wherein the information carrier comprises a transparent housing for the display (transparent layer 26 of fig. 2), wherein the housing preferably comprises a sealing protective layer for protecting the display from air, water and/or water vapor (protective layer 26 of fig. 2, [0026]), and wherein the protective layer preferably comprises a transparent inorganic or organic coating or cover plate (layer 26 is transparent, [0026]).

As to **claim 64** (dependent on 51), Procupetz discloses assembly, wherein the information carrier is a flag or banner (flag 2 of fig. 1), wherein the flag or banner, preferably on two sides, is provided with the display (as shown in fig. 3), and wherein the holder comprises a flagpole and/or banner arm (mast type supporting component 1 of fig. 1).

As to **claim 65** (dependent on 64), Thagard discloses assembly, wherein the information carrier is made of a flexible and/or elastic material (transparent PVC laminar body 2 of fig. 1).

As to **claim 67** (dependent on 65), Migler discloses assembly, wherein the edges of the display device are provided with an enveloping, gas-filled layer (elements 9, 7 and 9 of fig. 1).

As to **claim 70** (dependent on 51), Migler discloses assembly, wherein the information carrier comprises a rotor (cylindrical vertical member 2 of fig. 3), which is placed so as to be rotatable about a substantially vertical axis of rotation (around tower 1 of fig. 3), wherein the rotor has a substantially S-shaped cross-section (as shown in

fig. 3, counter-positioned elements 7 attached to element 4 create substantially S shape) in a direction substantially perpendicular to the axis of rotation of the rotor (with respect to tower 1 of fig. 3), and wherein the display preferably substantially follows the aerodynamic shape of the wind surface (sails 8 are equipped with display device, col. 6, lines 23 - 28).

As to **claim 72** (dependent on 71), Albert discloses device according, wherein the display is an electrophoretic display [0093].

As to **claim 73** (dependent on 71), Thagard discloses device, wherein the addressable surface parts are placed in columns and rows for forming a matrix display (14A of fig. 3, [0028]) for displaying changing and/or moving images [0033].

As to **claim 74** (dependent on 71), Procupetz discloses information carrier (laminar body 2 of fig. 1) and/or holder (supporting component 1 of fig. 1).

10. **Claims 57 – 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Procupetz in view of Migler, Thagard, Albert and Stephens (US 6,722,771).

As to **claim 57** (dependent on 51), Thagard discloses assembly, wherein at least one of the one or more devices comprises a sensor (sensor 44 of fig. 3) for perceiving the surroundings of said device [0044], wherein the sensor (44 of fig. 3) is connected to the control means of said device for transmitting a signal from the sensor to the control means (30 and 32 of fig. 3), and wherein the control means are adapted for controlling

the display in dependency on the sensor's signal (changing color scheme of image based on sensor signal, [0038]).

Procupetz in view of Migler, Thagard and Albert fails to disclose a sensor for detecting motion and/or direction of the surface.

In the same field of endeavor, Stephens discloses a portable optical signaling device, particularly an item of a torch (Abstract; Figures 1-5), containing: a signaling component (Item 20) that can be switched between an initial state and a second state based, and a sensor (s-3, Col. 3, lines 4-8) for determining the position of the signaling device or its signaling component and/or variables derived therefrom (Co1.1, lines 46-50; Col. 4, lines 40-46).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the portable optical signaling device of Procupetz in view of Migler, Thagard and Albert by incorporating the sensor for determining the position of the signaling device, as disclosed by Stephens, so as to provide user friendly a portable optical signaling device that change states automatically.

As to **claim 58** (dependent on 57), Stephens discloses assembly, wherein the sensor comprises a position sensor (position sensitive switch S3, col. 3, lines 15 – 20).

As to **claim 59** (dependent on 57), Thagard discloses assembly, wherein the control means (30 and 32 of fig. 3) are adapted for forwarding the sensor's signal (44 of fig. 3) or a derived quantity thereof to a data processing device (30 of fig. 3).

11. **Claim 66** is rejected under 35 U.S.C. 103(a) as being unpatentable over Procupetz in view of Migler, Thagard, Albert and Williamson (WO 93/23838).

As to **claim 66** (dependent on 65), Procupetz in view of Migler, Thagard, Albert discloses assembly, but fails to disclose that the display can be retracted in the holder, preferably in the banner arm.

In the same field of endeavor, Williamson discloses and assembly wherein the display (map 182 and cover 128 of fig. 7) can be retracted in the holder (tubular housing 122 of fig. 1, ABSTARCT).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the portable optical signaling device of Procupetz in view of Migler, Thagard and Albert by providing a holder as disclosed by Williamson, so as to provide an effective mechanism of protecting the display (Williamson, page 1, line 7 – page 3, line 10).

12. **Claim 68** is rejected under 35 U.S.C. 103(a) as being unpatentable over Procupetz in view of Migler, Thagard, Albert and Vock et al. (US 2002/0116147).

As to **claim 68** (dependent on 65), Procupetz in view of Migler, Thagard, Albert discloses assembly comprising a wind surface and the wind surface blowing in the wind, but fails to disclosed that the surface is at least partially provided with a piezoelectric foil situated in the wind surface, for generating electric power.

In the same field of endeavor, Vock discloses an assembly wherein the surface (display, [0024]) is at least partially provided with a piezoelectric foil situated in the surface (display is integrated with the sensor comprising piezoelectric foil, [0024]), for generating electric power (the foils generate a voltage from a force acting on them, [0024]).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the portable optical signaling device of Procupetz in view of Migler, Thagard and Albert by providing piezoelectric foil on the surface of the display as disclosed by Vock, so as to eliminate the need for the batteries (Vock, [0024]).

13. **Claim 69** is rejected under 35 U.S.C. 103(a) as being unpatentable over Procupetz in view of Migler, Thagard, Albert and Burns (US 4,615,214).

As to **claim 69** (dependent on 65), Procupetz in view of Migler, Thagard, Albert discloses assembly comprising the holder and the carrier, but fails to disclose that the holder and/or the information carrier are provided with piezoelectric elements for absorbing a tensile force exerted by the wind on the wind surface, and for converting said tensile force in electric power.

In the same field of endeavor, Burns discloses an assembly wherein the holder (mast 14 of fig. 1) is provided with piezoelectric elements (sensors 12 of fig. 1) for absorbing a tensile force exerted by the wind on the wind surface, and for converting

said tensile force in electric power (generating sensor energy from the wind, col. 3, lines 5 - 25).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the portable optical signaling device of Procupetz in view of Migler, Thagard and Albert by providing piezoelectric elements as disclosed by Burns, so as to minimize the need for moving parts thus reducing the need for maintenance and number of breakage problems (Burns, col. 1, lines 1 – 15).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DMITRIY BOLOTIN whose telephone number is (571)270-5873. The examiner can normally be reached on Monday-Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571)272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. B./
Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629